tip and abaxial side pilose, stalks conspicuous, ca. 0.4 mm, stout, pilose; gynoecium immersed in the tube, glabrous, 3–3.8 mm, ovary globose to ellipsoid, 1–1.2 × 0.6–0.8 mm, gradually merging into the style (ca. 2.4 mm) with small, discoid stigma. Immature fruits ellipsoid to globose, 2.8–3 × 2–2.9 cm, longitudinally ribbed.

IUCN Red List category. *Cryptocarya yasuniensis* is known from only three collections and is listed as Data Deficient (DD) according to IUCN Red List criteria (IUCN, 2001).

Phenology. Plants were observed with flowers in August and with immature fruits in June and October.

Discussion. *Cryptocarya yasuniensis* seems to be closely related to *C. riedeliana* P. L. R. Moraes, known from Bahia, Espírito Santo, and Rio de Janeiro in southern Brazil. However, it can be distinguished by the combination of its short, deeply canaliculate petioles and larger, ovate leaves with secondary veins prominent abaxially. Additionally, its floral characters differ in both size and shape, which allows its specific recognition.

Paratypes. ECUADOR. **Napo:** Aguarico, Res. Etnica Huaorani, carr. Maxus en construcción, Km 61, al sur del Río Tivucano, 0°48′S, 76°23′W, 250 m, 26–30 Oct. 1993 (immat. fr.), *M. Aulestia, M. Ami & R. Ami 996* (MO). **Pastaza:** Río Tigüeno, Quihuaro, 1°16′S, 77°11′W, 230 m, 4 June 1995 (immat. fr.), *J. S. Miller, P. Yépez, Nanka, Coba & Namonka 803* (MO).

First Report of *Cryptocarya guianensis* from Ecuador

As pointed out by Moraes (2007), *Cryptocarya guianensis* is a species infrequently collected in Brazilian Amazonia or in the Guyana Shield region (known mainly from French Guiana). From information available on specimen labels, the species has been reported either as small trees ranging from 4 to 15 m, thus reproducing in the understory, or as large trees up to 25 m. Still, the contrasting colors noted on its bark and sapwood would also suggest it is a rather variable entity or that more than one taxon could be involved. Adopting the current circumscription described in Moraes (2007), the following specimens are here ascribed to *C. guianensis*:

ECUADOR. **Napo:** Cantón Archidona, faldas al sur del Volcán Sumaco, carr. Hollín-Loreto, entre Huamaní y el Río Pucuno (fl.), *W. Palacios & C. Iguago 4637* (HBG, MO, NY); carr. Hollín-Loreto, Km 45 (immat. fr.), *F. Hurtado, D. Neill & A. Alvarado 2798* (HBG, MO), Km 50 (immat. fr.), *W. Palacios 4173* (HBG, MO); Parque Nac. Sumaco-Galeras, S slope of Sumaco volcano (fl.), *J. Homeier & M. A. Chinchero 1882* (MO [2]); Cordillera de Guacamayos, ca. 6 km SE of Cosanga (fl.), *J. Homeier, M. A. Chinchero, E. Jaramillo & L. Guamachin 3140* (MO); Cantón El Chaco, Proyecto Hidroeléctrico Coca, Punto ST3, margen derecha del Río Quijos, ca. 10 km S de Reventador, (fl.), *W. Palacios 5813* (MO), *W. Palacios 5821* (MO, QCNE).

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A New Species of *Typhonium* (Araceae) from Vietnam

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ABSTRACT. A new species, *Typhonium vermiforme* V. D. Nguyen & Croat (Araceae), is described from living materials collected from Quang Binh Province in central Vietnam. It is similar to *T. bachmaense* V. D. Nguyen & Hett. and *T. trilobatum* Schott, but differs from the first species by its much shorter spathe (ca. 9 cm long) and the distinctive, filiform and intertwining staminodes. It differs from the second species in having a solitary leaf and a pedate leaf blade.

Key words: Araceae, IUCN Red List, *Typhonium*, Vietnam.

The previously undescribed species presented here was discovered in Tra Noi, Xuan Trach Commune, Bo Trach District, Quang Binh Province, during fieldwork conducted in cooperation between the Institute of Ecology, Biological Resources (IEBR) and the Royal Botanic Garden, Kew (K) in central Vietnam in 2007. It differs from all other previously described species (Gagnepain, 1942; Sriboonma et al., 1994; Sookchaloem, 1995; Nguyen & Croat, 1997; Sookchaloem & Murata, 1997; Hetterscheid & Nguyen, 2001; Hetterscheid et al., 2001; Nguyen & Vu, 2004; Hetterscheid & Galloway, 2006). Because the plant is very rare in the locations where the type specimen was collected, only one voucher was prepared. Its tuber was cultivated in Hanoi, but unfortunately it did not survive; the plant should therefore be re-collected.

Typhonium vermiforme V. D. Nguyen & Croat, sp. nov. TYPE: Vietnam. Quang Binh Prov.: Bo Trach Distr., Xuan Trach Commune, Tra Noi, 10 Feb. 2010, *V. D. Nguyen, X. P. Vu, R. P. J. Kok, T. A. Utteridge, A. Moore, M. Trudgen & M. Briggs 2104* (holotype, HN; isotype, K). Figure 1.

Haec species quoad folium omnino pedatum ad *Typhonium bachmaense* V. D. Nguyen & Hett. accedit, sed ab eo spatha multo breviore oblonga usque ovata atque staminodiis linearibus acuminatis curvatis differt.

Tuberous plant, to 37 cm tall; tuber cylindrical but subconical at apex, ca. 2.5 × 1.5 cm, dull white outside, white inside. LEAVES solitary; *petiole* ca. 36 cm, encrusted by dark spots on dull brown to light brown background; *lamina* pedate-trisect, with 5 lobes, the middle lobe sessile, lateral lobes attached on stipes 3.5–4 cm, lobes obovate to elliptic or lanceolate or diamond-shaped, 12–14.5 × 5–6.5 cm, dark green on adaxial surface, base obtuse or acuminate, apex obviously cuspidate or acuminate, the acumen 1–2 cm; primary lateral and collective veins distinguished from others; *primary lateral veins* in 7 to 11 pairs, collective veins 3–10 mm from margin. INFLORESCENCE solitary; *peduncle* ca. 5 cm, with only 2 cm emerging from leaf sheath, dull white to light pink, with elongate, light brown dots; *spathe* ca. 9 cm; spathe tube ovate, ca. 1.5 × 1 cm (width at base), dark brown dotted on dull light pink to white background outside; *spathe* lamina oblong to ovate, ca. 4.5 × 1.8 cm (width at widest point), light yellow-green. *Spadix* ca. 16.5 cm; *female portion* conical, ca. 3 × 5 mm (width at base); sterile portion ca. 1.7 cm, curved sterile flowers concealed to 6 mm from base, upper portion empty, smooth; *male portion* cylindrical, ca. 4.5 × 1.5 mm, light pink; appendix stipitate, subulate or narrowly long-tapered, ca. 14 × 0.5 cm (width at base), stipe ca. 1.5 mm, dark yellow in color; *ovary* obovate to bottle-shaped, ca. 1.5 × 0.6 mm; stigma sessile, discoid, ca. 0.2–0.3 mm diam., light pink; stamens sessile; anthers subglobose, dehiscing by apical pores; sterile flowers slender, linear, staminodes twisted and curved together, 3–4 mm, bluntly acuminate, pinkish but yellowish pink at apex.

Distribution and habitat. *Typhonium vermiforme* grows in the gaps between layers of stone on hills and in shady areas of open forest; it is known from one collection made in Quang Binh Province, Vietnam.

IUCN Red List category. *Typhonium vermiforme* is considered here as Data Deficient (DD) according to IUCN Red List criteria (IUCN, 2001). The species is

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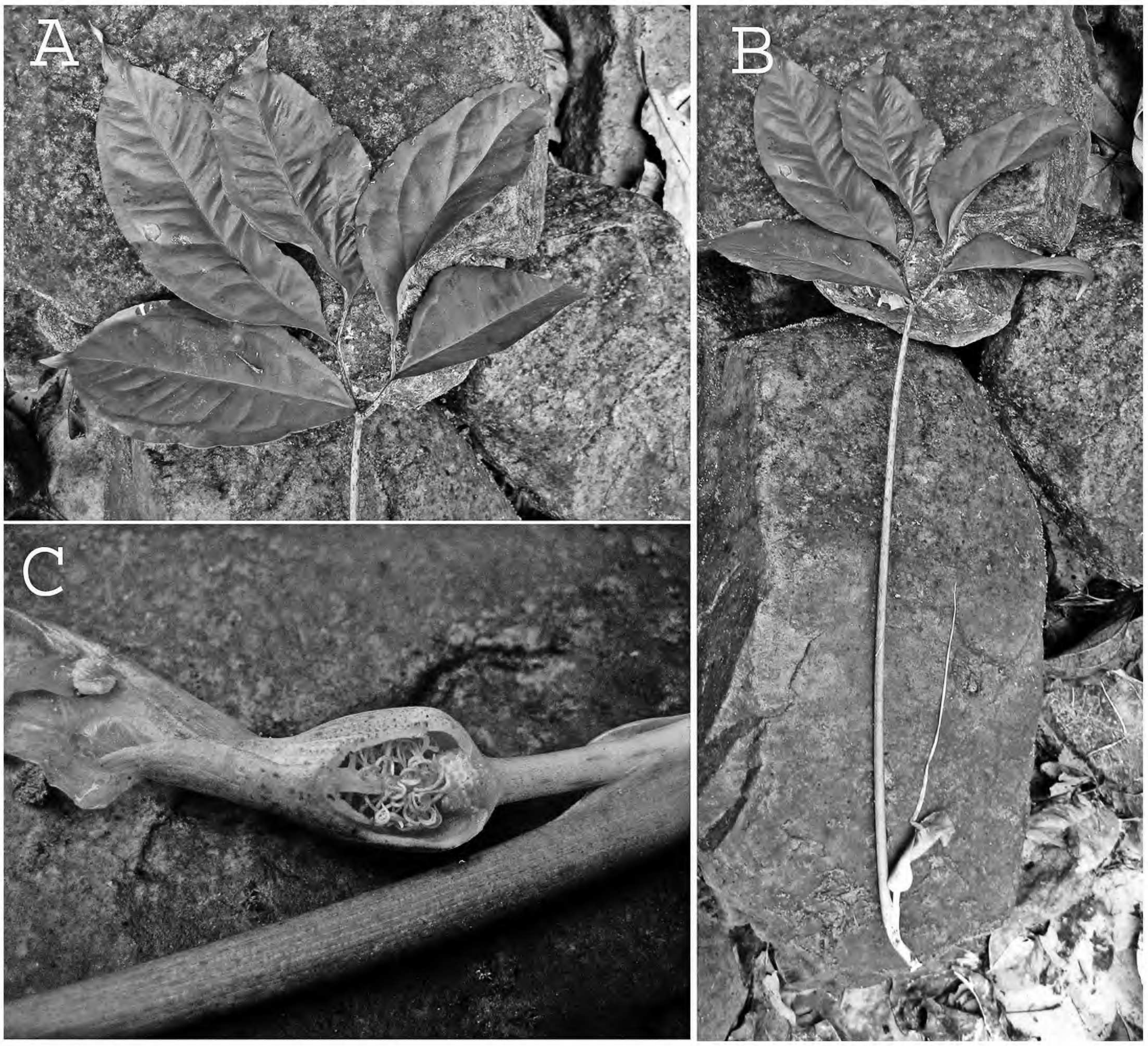

Figure 1. *Typhonium vermiforme* V. D. Nguyen & Croat (*V. D. Nguyen et al. 2104*, HN, K). —A. Close-up of leaf blade with adaxial surface exposed. —B. Entire leaf blade and attached inflorescence (along spadix paralleling petiole). —C. Cutaway section of tube showing pistillate portion and vermiform staminodes. Photos of type specimen by Nguyen Van Du.

known only from a single collection, but the area where it was collected is still poorly known so there is no way to predict how common the species is.

Etymology. The specific epithet is taken from the Latin "vermiformis" and refers to the wormlike appearance of the staminodes.

Relationships. Typhonium vermiforme is most closely related to *T. bachmaense* V. D. Nguyen & Hett. in its fully pedate leaves, a character that is rarely found in the genus. The two species also share similar staminodes, an elongated, subulate appendix, and a short stipe. However, *T. vermiforme* can be distinguished by its much shorter oblong-ovate spathe and its very slender spreading staminodes that are bluntly acuminate at apex and twisted and curved together. *Typhonium vermiforme* may also be confused with *A. trilobatum* Schott but differs from that species in having a solitary leaf and a pedate leaf blade.

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